CHANGES TO THE CLAIMS:

Claim listing:

1-29. (Cancelled)

30. (Currently Amended) In a communication system, a method of generating ~~an~~ a digital output data stream for subsequent digital-to-analog conversion to carrier signals having a plurality of frequency bins~~different frequencies and carrying subsymbols from an input data stream~~, ~~said~~ the method comprising:

receiving the digital input data stream;~~and~~

generating ~~a~~ digital ~~form of said carrier signals carrying said~~ subsymbols in response to the data stream;

~~by~~ generating digital data points representing the subsymbols without entering the time domain in response to the subsymbols; and

accumulating the digital data points associated with one or more of the frequency bins.

~~and combining a time-domain sequence of signals in response to said input data stream.~~

31. (Currently Amended) A method as claimed in claim 30 wherein ~~said~~ the carrier signals comprise at least a first carrier signal having a first frequency and carrying a first subsymbol and a second carrier signal having a second frequency and carrying a second subsymbol, wherein ~~said~~ the input data stream comprises input digital first data and input digital second data, and wherein ~~said~~ the generating digital subsymbols comprises generating a digital form of ~~said~~ the first carrier signal carrying ~~said~~ the first subsymbol in response to ~~said~~ the first data and generating a digital form of

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said the second carrier signal carrying said the second subsymbol in response to said the second data.

32.   (Currently Amended) A method as claimed in claim 31 wherein said the generating digital data points comprises:

storing one or more addressable tables of stored values;

addressing one or more of the tables;

reading a plurality of the stored values from the one or more tables; and

generating sets of signals to correspond to characteristics of said the first and second carrier signals based at least in part on the stored values read from the one or more addressed tables.

33.   (Previously Presented) A method as claimed in claim 32 wherein the characteristics comprise frequency and phase.

34.   (Previously Presented) A method as claimed in claim 33 wherein the characteristics further comprise amplitude.

35.   (Currently Amended) A method as claimed in claim 31 wherein said the receiving comprises one or more steps selected from the group consisting of:

generating the input digital first and second data from an analog input signal;

generating the input digital first and second data from a digital data input signal; and

generating the input digital first and second data from an analog input signal and a digital data input signal.

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36.   (Currently Amended) A method as claimed in claim 31 wherein ~~said~~ the generating digital data points comprises:

storing a table of values corresponding to at least a portion of a periodic wave;

addressing the table;

reading a plurality of the stored values from the table so that the read values represent the frequency and phase of ~~said~~ the first and second carrier signals;

calculating digital values corresponding to the amplitude of the first and second carrier signals based at least in part on the stored values read from the table; and

accumulating the calculated digital values.

37.   (Previously Presented) A method as claimed in claim 36 wherein the periodic wave comprises a sine wave.

38.   (Currently Amended) A method as claimed in claim 36 wherein ~~said~~ the system comprises: a primary site including a receiver;

wherein the stored values read from the table correspond to waves having frequency and phase characteristics corresponding to the frequency and phase characteristics of the first and second carrier signals to be transmitted to the receiver of the primary site;

wherein ~~said~~ the calculating comprises multiplying stored values read from the table by an amplitude factor to generate ~~said~~ the calculated digital values, the amplitude factor being dependent on the input digital first and second data; and

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wherein ~~said~~ the accumulating the calculated digital values comprises summing ~~said~~ the calculated digital values.

39.   (Currently Amended) A method as claimed in claim 38 wherein ~~said~~ the addressing the table comprises:

controlling the step sizes of the sequence of addresses that are to be used to address the table, including a first step size corresponding to the first carrier signal and a second step size corresponding to the second carrier signal; and

setting the start location at which the table is first addressed for each of the first and second step sizes in response to the digital input ~~digital~~ data.

40.   (Currently Amended) A method as claimed in claim 39 wherein ~~said~~ the controlling comprises generating a plurality of step sizes which correspond to a number of carrier signals less than the number of carrier signals received by the receiver of the primary site.

41.   (Previously Presented) A method as claimed in claim 37 wherein the table comprises digital data corresponding to a complete sine wave.

42.   (Previously Presented) A method as claimed in claim 40 wherein the table comprises digital data corresponding to a complete sine wave.

43.   (Previously Presented) A method as claimed in claim 40 wherein the table comprises digital data corresponding to a quarter sine wave.

44.   (Previously Presented) A method as claimed in claim 43 and further comprising the step of generating data representing a complete sine wave from the digital data in the table.

45.   (Previously Presented) A method as claimed in claim 30, wherein the carrier signals carry at least some subsymbols aligned in time.

46.   (Canceled)

47.   (Canceled)

48.   (Canceled)

49.   (Currently Amended) In a communication system, apparatus for generating ~~an~~ a digital output data stream for subsequent digital-to-analog conversion to carrier signals having a plurality of frequency bins~~different frequencies and carrying subsymbols from an input data stream~~, ~~said~~ the apparatus comprising:

        means for receiving the digital input data stream;~~and~~

        means for generating ~~a digital form of said carrier signals carrying said~~ subsymbols in response to the data stream;

        ~~by~~ means for generating digital data points representing the subsymbols without entering the time domain in response to the subsymbols; and

        means for accumulating the digital data points associated with one or more of the frequency bins~~and combining a time domain sequence of signals in response to said input data stream~~.

50.   (Currently Amended) Apparatus as claimed in claim 49 wherein ~~said~~ the carrier signals comprise at least a first carrier signal having a first frequency and carrying a first subsymbol and a second carrier signal having a second frequency and carrying a second subsymbol, wherein ~~said~~ the input data stream comprises input digital first data and input digital second data, and wherein ~~said~~ the means for generating digital subsymbols comprises means for generating a digital form of ~~said~~ the first carrier

signal carrying ~~said~~ the first subsymbol in response to ~~said~~ the first data and for generating a digital form of ~~said~~ the second carrier signal carrying ~~said~~ the second subsymbol in response to ~~said~~ the second data.

51.   (Currently Amended) Apparatus, as claimed in claim 50, wherein ~~said~~ the means for generating <u>digital data points</u> comprises:

means <u>for</u> storing one or more addressable tables of stored values;

means for addressing one or more of the tables;

means for reading a plurality of the stored values from the one or more tables; and

means for generating sets of signals to correspond to characteristics of ~~said~~ the first and second carrier signals based at least in part on the stored values read from the one or more addressed tables.

52.   (Previously Presented) Apparatus as claimed in claim 51 wherein the characteristics comprise frequency and phase.

53.   (Previously Presented) Apparatus as claimed in claim 52 wherein the characteristics further comprise amplitude.

54.   (Currently Amended) Apparatus as claimed in claim 50 wherein ~~said~~ the means for receiving comprises one or more means selected from the group consisting of:

means generating the input digital first and second data from an analog input signal;

means for generating the input digital first and second data from a digital data input signal; and

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means generating the input digital first and second data from an analog input signal and a digital data input signal.

55.   (Currently Amended) Apparatus as claimed in claim 50 wherein ~~said~~ the means for generating digital data points comprises:

means for storing a table of values corresponding to at least a portion of a periodic wave;

means for addressing the table;

means for reading a plurality of the stored values from the table so that the read values represent the frequency and phase of ~~said~~ the first and second carrier signals;

means for calculating digital values corresponding to the amplitude of the first and second carrier signals based at least in part on the stored values read from the table; and

means accumulating the calculated digital values.

56.   (Previously Presented) Apparatus as claimed in claim 55 wherein the periodic wave comprises a sine wave.

57.   (Currently Amended) Apparatus as claimed in claim 55 wherein the system comprises a primary site including a receiver;

wherein the stored values read from the table correspond to waves having frequency and phase characteristics corresponding to the frequency and phase characteristics of the first and second carrier signals to be transmitted to the receiver of the primary site;

wherein ~~said~~ the means for calculating comprises means for multiplying stored values read from the table by an amplitude factor to generate ~~said~~ the calculated digital values, the amplitude factor being dependent on the input digital first and second data; and

wherein ~~said~~ the means for accumulating the calculated digital values comprises means for summing ~~said~~ the calculated digital values.

58.   (Currently Amended) Apparatus as claimed in claim 57 wherein ~~said~~ the means for addressing the table comprises:

means for controlling the step sizes of the sequence of addresses that are to be used to address the table, including a first step size corresponding to the first carrier signal and a second step size corresponding to the second carrier signal; and

means for setting the start location at which the table is first addressed for each of the first and second step sizes in response to the digital input ~~digital~~ data.

59.   (Currently Amended) Apparatus as claimed in claim 58 wherein ~~said~~ the means for controlling comprises means for generating a plurality of step sizes which correspond to a number of carrier signals less than the number of carrier signals received by the receiver of the primary site.

60.   (Previously Presented) Apparatus as claimed in claim 56 wherein the table comprises digital data corresponding to a complete sine wave.

61.   (Previously Presented) Apparatus as claimed in claim 59 wherein the table comprises digital data corresponding to a complete sine wave.

62. (Previously Presented) Apparatus as claimed in claim 59 wherein the table comprises digital data corresponding to a quarter sine wave.

63. (Previously Presented) Apparatus as claimed in claim 62 and further comprising means for generating data representing a complete sine wave from the digital data in the table.

64. (Previously Presented) Apparatus as claimed in claim 49, wherein the carrier signals carry at least some subsymbols aligned in time.

65. (Canceled)

66. (Canceled)

67. (Canceled)